REMARKS

Following entry of the above amendments, claims 1-10, 27 and 28 are amended and remain in prosecution. The amendments are supported by original claims 1, 11, 25 as well as the disclosures at paragraphs 17 and 18 of the specification.

Claims 11-26 are cancelled. Claims 29-37 are newly added. Applicants submit that no new matter is added herein.

Election/Restrictions

Applicants herein affirm the election, without traverse, of the claims of Group I (claims 1-11, 27 and 28) for further prosecution. Applicants reserve the right to file one or more divisional applications on the unelected claims pursuant to 35 U.S.C. § 120 and § 121.

Claim Objections

Claims 1-10, 27 and 28 were objected to for the use of the phrase "characterized in that" in all the claims and the use of parentheses in claim 1 lines 14-18.

Per the suggestion of the Office Action, claims 1-10, 27 and 28 are amended to change "characterized in that" to "wherein" wherever applicable. Further, the parentheses that were objected to by the outstanding Office Action were deleted.

Applicants submit that the amendments render the claim objections moot.

Claim Rejections - 35 USC § 112

Claims 1-10, 27 and 28 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the Office Action asserts that the reaction equation "W: W_c+W_{GIC}" and the term "(w_c/c) + (second binder phase)/(reactive glass) + w_{GIC}/(reactive glass)" render the claim indefinite.

By this Amendment, claim 1 is amended to delete the reaction equation and the phrase referred to in the Office Action. Accordingly, Applicants submit that the rejection is overcome and should be withdrawn.

Regarding claims 2-8 and 28, the Office Action notes that these claims recite a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation and are considered indefinite.

By this Amendment, claims 2-8 and 28 are amended to delete the narrow range or limitation that falls within the broad range or limitation, thus rendering the rejections moot.

Regarding claim 27, this claim was rejected because the Office Action asserted that there is insufficient antecedent basis for the binder phase.

By this Amendment, claim 27 is amended to clarify that the binder phase refers to the first binder phase, thus rending the rejection moot.

Claim Rejections - 35 USC § 103

1. Hermansson et al. (US 2003/0121454) in view of Kato et al. (US patent 5,520,725)

Claims 1, 6, 8, 10 and 27 were rejected under 35 USC 103(a) as being obvious over Hermansson et al. in view of Kato et al. Applicants respectfully traverse the rejection.

The instantly claimed invention as recited in claim 1 is directed to a system for a chemically bonded material, especially a dental filing material or an implant material. The system contains a first portion of aqueous hydration liquid, a powdered material comprising a first binder phase, a second, non-ceramic binder phase, a reactive glass and a second portion of aqueous hydration liquid.

The system of the claimed invention provides improved early-age properties, such as initial strength, pore closure, translucency and improved end-product properties including

bioactivity. The combination of improved initial and final properties is achieved by using a combination of two chemically compatible subsystems, where one is working in the initial phase involving the cross-linking chemistry and the other is the main system involving hydration chemistry.

In contrast, Hermansson et al. disclose a method for the production of a chemically bound ceramic (CBC) material by means of reaction between a binding phase of one or more powdered binding agents and a liquid reacting with these binding agents. According to Hermansson et al., in a significant aspect of the invention, calcium aluminates, which react with water, forming calcium aluminate hydrate are used as the main binding phase. (See paragraph 12)

Compared with the instantly claimed system, the chemically bonded ceramic material disclosed in Hermansson et al. does not contain a second non-ceramic binder phase comprising a polycarboxylic acid or a copolymer or a salt or an ester thereof having a molecular weight of 100 to 250,000. Moreover, Hermansson et al. does not disclose any of the weight ratio limitations as recited in instant claim 1.

Kato et al. does not cure these deficiencies either. Kato et al. relates to a dental glass ionomer cement composition comprising (a) α-β unsaturated carboxylic acid polymer; (b) a

polymerizable unsaturated organic compound having a CH2=C(R1)-COO group, (c) water, (d) an organic aromatic compound having a $-SO_2$ group, (e) a fluoroaluminosilicate glass powder capable of reacting with component (a), and (f) a compound containing at least one element selected from the group consisting of aluminum, ion and tin.

The outstanding Office Action asserts that one skilled in the art would add polyacrylic acid disclosed in Kato et al. to the system disclosed in Hermansson et al. and arrive at the instantly claimed invention.

Applicants respectfully submit that the combination as applied by the Office Action is improper because the Office Action fails to provide proper motivation for such a combination.

As it is known to a person skilled in the art, glass ionomer cement is a different type of dental cements as compared to chemically bound ceramic material, because the former makes use of the reaction of fluoroaluminosilicate glass powders with a polycarboxylic acid, and the latter makes use of the reaction of an inorganic material such as calcium aluminates with water. As discussed above, Kato et al. relates to a five-component glass ionomer cement composition, whereas Hermansson et al. relates to a chemically bound ceramic material. Because the

glass ionomer cement compositions and chemically bound cement systems are different compositions containing different components, the Office Action fails to provide any motivation as to why one skilled in the art would select any component from a glass ionomer cement composition and add it to a completely different chemically bound cement system, much less any motivation to select component (a) from a five-component system as disclosed in Kato et al. and add it to a CBC system as disclosed by Hermansson et al.

In addition, Kato fails to disclose any of the weight ratio limitations as recited in instant claim 1. Therefore, even if one did combine the teachings of Hermansson et al. and Kato et al., Applicants submit that he would not, the combination would not disclose or suggest the instantly claimed invention because the combination still does not disclose any of the weight ratio limitations as recited in instant claim 1. Accordingly, the rejection is untenable and should be withdrawn.

2. Hermansson et al. in view of Kato et al. and Jia et al. (US 2003/0125444, hereafter Jia I)

Claims 2-4 were rejected under 35 USC 103(a) as being obvious over Hermansson et al. in view of Kato et al. as applied to claim 1 and Jia I.

Jia I discloses a dental resin composition comprising a curable polycarbonate-modified diphenoxy diacrylate having a specific structure. It is relied upon for the disclosure of an aqueous or organic solution of ceramic filler under acidic conditions from pH 1 to 4.

As discussed above, the combination of Hermansson et al. and Kato et al. does not disclose or suggest the invention as recited in instant claim 1, from which, claims 2-4 depend. Therefore, for at least the same reasons, the combination of Hermansson et al., Kato et al. and Jia I does not disclose or suggest the invention as recited in instant claims 2-4. Accordingly, the rejection is untenable and should be withdrawn.

3. Hermansson et al. in view of Kato and Ario et al. (US 2003/0114554)

Claims 5, 7 and 28 were rejected under 35 USC 103(a) as being obvious over Hermansson et al. in view of Kato et al. as applied to claim 1 and in further view of Ario et al.

Ario et al. relates to resin cement materials containing filler, polymerizable resin and a polymeric handling modifier that is dispersed in the polymerizable resin at 25°C and that has a molecular weight of between about 500 and 100,000. The

outstanding Office Action relies on Ario et al. for the teaching of the additional limitations contained in claims 5, 7 and 28.

Claims 5, 7 and 28 depend from claim 1 either directly or indirectly. For at least the same reasons discussed above in the context of 103 rejection as applied to claim 1, the combined teachings of Hermansson et al., Kato et al. and Ario et al. does not disclose or suggest the invention as recited in instant claims 5, 7 and 28. Accordingly, the rejection is untenable and should be withdrawn.

4. Hermansson et al. in view of Kato et al. and Jia (US 2003/0083400, hereafter Jia II)

Claim 9 was rejected under 35 USC 103(a) as being obvious over Hermansson et al. in view of Kato et al. as applied to claim 1 and in further view of Jia II.

Since the combination of Hermansson et al. and Kato et al. does not disclose or suggest instant claim 1, for at least the same reasons, the combination of Hermansson et al., Kato et al. and Jia II does not disclose or suggest the invention as recited in instant claim 9, which depends from claim 1. Accordingly the rejection is untenable and should be withdrawn.

In view of the above, Applicants believe that the instant applicant is in condition for allowance. Reconsideration and

withdrawal of the outstanding rejections and early notice of allowance to that effect is respectfully requested.

Any fees due with this Reply may be charged to Deposit Account **23-1665** under Customer Number **27267.**

If the Examiner finds that a telephone conference would further prosecution of this application, the Examiner is invited to contact the undersigned at 203-498-4400.

Respectfully submitted,

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